

U.S. Patent Application No. 09/672,328
Request for Reconsideration dated August 12, 2003
Reply to Office Action of March 12, 2003

REMARKS

Reconsideration and continued examination of the above-identified application are respectfully requested.

At page 2 of the Office Action, the Examiner rejects claim 1 under 35 U.S.C. §112, first paragraph. The Examiner states that the specification is enabling for a pigment such as blue, black, white, brown, cyan, green, violet, magenta, red, yellow, and mixtures thereof, anthraquinones, phthalocyanine blues, phthalocyanine greens, diazos, monazos, pyranthrones, perylenes, heterocyclic yellows, quinacridones, and (thio) indigoids. However, the Examiner asserts that these pigments do not reasonably provide enablement for all the pigments in the chemical field. Furthermore, the Examiner asserts that the present specification fails to provide information that would allow one skilled in the art to practice the present invention without undue experimentation.

The Examiner also asserts that applicant's specification provides only six particular examples to represent the modified pigments of the present invention. According to the Examiner, those examples are not exemplary of the entire scope of modified pigments. Thus, the Examiner concludes that the specification of the present application fails to provide sufficient working examples to support the claimed modified pigments and the method of making them.

The Examiner further states that while the specification is enabling for one organic ionic group, such as $C_6H_4CO_2$, $C_6H_4SO_3$, $C_{10}H_6CO_2$, $C_{10}H_6SO_3$, $C_2H_4SO_3$, etc., the specification does not reasonably provide enablement for all the organic ionic groups in the chemical field.

Furthermore, the Examiner asserts that while the specification is enabling as to one amphiphilic counterion group, such as cationic amphiphilic ions and anionic amphiphilic ions, the specification does not reasonably provide enablement for all of the amphiphilic counterion groups

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in the chemical field. Therefore, the Examiner requests that the scope of the claim regarding the amphiphilic counterion groups be limited to the amphiphilic counterion groups specifically listed in the specification. For the following reasons, this rejection is respectfully traversed.

With respect to the term "pigment," the present application provides clear support for this term by way of description and specific examples. For instance, the examples provided at pages 13 and 14 enable a person having ordinary skill in the art to practice the full scope of the claimed invention. In view of the specific examples and the general classes of pigments provided in the specification, clearly, one skilled in the art would understand that any pigment can be used to make the modified pigment product as set forth in the claims of the present application. The listed classes of pigments and the representative examples recited throughout the specification provide a sufficiently clear explanation of the invention so as to enable a person having ordinary skill in the art to make and use the claimed invention without undue experimentation.

According to the Federal Circuit, if only one species of an invention is provided, but there is still enough information to produce the other species without undue experimentation, the enablement requirement for a generic claim is satisfied. *United States v. Teletronics, Inc.*, 8 U.S.P.Q.2d 1217 (Fed. Cir. 1988). As stated earlier, examples in the specification clearly show one skilled in the art that any pigment can be used to make a modified pigment product as set forth in the claims of the present application. Furthermore, the techniques for use of other pigments not specifically cited in the specification is routine in view of the disclosure in the present application. According to *In re Wands*, 8 U.S.P.Q.2d 1400 (Fed. Cir. 1988), the non-disclosed information involving techniques that are labor-intensive, but nonetheless routine, does not constitute unreasonable experimentation and satisfies the enablement requirement. In that case, the

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application claimed an immunoassay that used high-affinity monoclonal antibodies specific for a hepatitis B antigen; the patent was challenged because the antibodies were not made available. The challenger claimed that a great amount of labor would be required to produce high-affinity monoclonal antibodies. The Federal Circuit held that labor alone does not constitute unreasonable experimentation because the techniques were routine, and ruled that the enablement requirement was satisfied. Converting any pigment to a modified pigment would not be undue experimentation, and would involve the same procedures and be routine in view of the present application. Therefore, the claimed invention is enabled.

Furthermore, the Examiner does not provide any technical reason or prior art to support the argument that the term "pigment" is not enabled by the present application. To the contrary, numerous patents in the pigment, ink, and coating area use the term pigment and provide similar types of examples as in the present specification. Accordingly, the technical skill possessed by one skilled in the art could easily produce a pigment having the groups set forth in the claims of the present application. Absent the Examiner providing concrete technical evidence to support a lack of enablement rejection, the present specification by way of specific examples and detailed teachings has provided sufficient enablement to one skilled in the art to make and use the entire scope of the claimed invention. Accordingly, this part of the rejection should be withdrawn.

With respect to the Examiner's argument that the scope of the claim regarding the organic ionic group be limited to the organic ionic groups specifically listed in the specification, the applicant respectfully disagrees. Again, the Examiner has provided no technical reasons or prior art to support the argument that the present specification does not provide enablement to one skilled in the art. The Examiner has the burden to initially provide some foundation for the conclusion that

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the present specification does not provide enablement to one skilled in the art, and that burden has not been met. Merely asserting that the present application should be limited to the specific, literally recited groups set forth in the specification is not sufficient grounds for an enablement rejection. The Examiner must set forth technical reasons why enablement is not satisfied in view of the skill possessed by one skilled in the art and in view of the technical disclosure provided by the present application. The present specification clearly provides a detailed listing of various organic groups that can be used as well as methods to attach organic groups onto a pigment. Furthermore, specific examples are provided showing the attachment of organic groups. For instance, beginning at page 9, line 20 to page 10, line 18, the specification provides a sufficiently clear explanation of the chemistry to enable a person having ordinary skill in the art to make and use the invention without undue experimentation.

As stated earlier under *United States v. Telectronics, Inc.*, if only one species of an invention is provided, but sufficient information exists to produce the other species without undue experimentation, the enablement requirement for the generic claim is satisfied. The present invention provides much more than one species. In addition, there is sufficient information provided throughout the specification to produce other species. Since the Examiner provides no technical support at all that undue experimentation would be required, the Examiner's statement is conclusory in nature, and this part of the rejection should be withdrawn.

With respect to the Examiner's request that the scope of the claim regarding the amphiphilic counterion groups be limited to the amphiphilic counterion groups specifically listed in the specification, the applicant respectfully disagrees. Again, the Examiner has provided no technical reasons or prior art to support the argument that the present specification does not provide

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enablement to one skilled in the art. The Examiner has the burden to initially provide some foundation for the conclusion that the present specification does not provide enablement to one skilled in the art, and that burden has not been met. Merely asserting that the present application should be limited to the specific, literally recited groups set forth in the specification, is not sufficient grounds for an enablement rejection. The Examiner must set forth technical reasons why enablement is not satisfied in view of the skill possessed by one skilled in the art and in view of the technical disclosure provided by the present application. The present specification clearly provides a detailed listing of various amphiphilic counterionic groups that can be used as well as methods to attach amphiphilic counterionic groups to a pigment. Specific examples are also provided showing the attachment of these groups. Moreover, page 11, line 7 - page 13, line 10 of the specification provides a sufficiently clear explanation of the amphiphilic counterion groups to enable a person having ordinary skill in the art to make and use the invention without undue experimentation. Accordingly, one skilled in the art would be clearly able to attach a variety of amphiphilic counterionic groups onto the pigment as set forth in the claims. Absent the Examiner providing clear technical support, this rejection should be removed, since the Examiner's statement is conclusory.

Moreover, the one patent relied upon by the Examiner in the rejection, U.S. Patent No. 5,698,016 to Adams et al., specifically refers to and claims organic groups and amphiphilic ions. Clearly, these terms have been recognized in the past and the type of disclosure for these terms as set forth in Adams et al. is no different from the type of support provided in the present application. Also, this patent supports the position that sufficient support and enablement exist in the present application. Accordingly, the rejection under 35 U.S.C. §112, first paragraph, should be

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withdrawn.

At page 4 of the Office Action, the Examiner rejects claims 23, 25, 29, and 31 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. With respect to claim 23, the Examiner asserts that the term "non-aqueous" is vague and indefinite. The Examiner asserts that non-aqueous can be powder or oily material in the composition.

With respect to claim 25, the Examiner asserts that the terms "binder," "one dye," "one biocide," "penetrant," and "surfactant" are vague and indefinite. The Examiner asserts that binder, for example, can be defined and specified in many ways. Furthermore, the Examiner asserts that the terms "a substrate" and "a solvent" in claims 29 and 31 are vague and indefinite. For the following reasons, this rejection is respectfully traversed.

The terms "binder," "one dye," "one biocide," "penetrant," "surfactant," "substrate," and "solvent" are immediately clear to a person of ordinary skill in the art, and such a person would find the exact details of the Examiner's rejection somewhat difficult to understand. It is interesting to note that the Examiner has allowed other patents to issue that recite terms such as "substrate" and "solvent" that were examined by him (e.g., U.S. Patent Nos. 6,465,688; 6,348,296; 6,248,922; 6,160,172; 6,090,978; and 6,087,529), but now asserts that one would be unable to understand the same terms in the present application. In fact, the applicant was able to find numerous patents that included these terms. Also, attached is the Contents page for the Ink Manual which shows the common acceptance for these terms. This Manual was incorporated by reference in the application. A portion of an Encyclopedia showing the common meaning of these ink terms as well is also attached. An earlier version of this reference was also incorporated into the present application.

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See pages 20 and 23 of the present application. Clearly, these terms are not vague or indefinite to one skilled in the art. Accordingly, the rejection of these terms under 35 U.S.C. §112, second paragraph, should be withdrawn.

At page 6 of the Office Action, the Examiner rejects claims 1-4, 6, 7, and 20-31 under 35 U.S.C. §103(a) as being unpatentable over Adams et al. (U.S. Patent No. 5,698,016) in view of Kato et al. (U.S. Patent No. 5,731,115). The Examiner asserts that Adams et al. describes a modified pigment, such as carbon black, having attached at least one organic group and at least an amphiphilic group, which can have a charge opposite to that of the organic group. Furthermore, the Examiner asserts that, for the organic group attached to the carbon, the organic group can be at least one aromatic group or one C₁-C₁₂ alkyl group which is directly attached to the carbon. According to the Examiner, col. 20, lines 1-58 of Adams et al. shows the formation of a carbon black with a polymeric cationic amphiphile such as methyl acrylate, methyl methacrylate, butyl acrylate, and styrene. In addition, the Examiner asserts that an ink may include a vehicle which functions as a carrier during printing, and/or includes additives to improve printability and drying.

Furthermore, according to the Examiner, col. 9, lines 45-59 of Adams et al. indicates that the formation of a non-aqueous or aqueous emulsion inkjet ink contains a suitable vehicle, binders and additives.

The Examiner acknowledges that Adams et al. differs from the claimed invention in that the steric group is unspecified. The Examiner also acknowledges that Adams et al. does not teach a print plate that contains a substrate, a protective layer, and an absorptive layer that contains at least one modified pigment. The Examiner further acknowledges that Adams et al. does not teach a method of imaging a lithographic print plate using a laser along with subjecting the plate to a

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solvent.

The Examiner, however, states that Kato et al. at col. 3, lines 8-11 describes the preparation of a waterless lithographic printing plate by using a laser beam. Furthermore, according to the Examiner, Kato et al. describes that the photoconductive layer includes a substrate with a precoated layer and charge generating agents including organic pigments, such as carbon black. Moreover, the Examiner states that in the wet process, the non-tacky resin layer is treated with a solvent to remove portions from the imaged layer.

Concerning the lack of a steric group, the Examiner asserts that Adams et al. does describe that the organic group can be at least one aromatic group or one C₁-C₁₂ alkyl group which is directly attached to the carbon. From this, the Examiner concludes that the bulky group, like the aromatic group can be used as either the organic group or the steric group depending on the choice of one skilled in the art. Therefore, it would have been obvious to one skilled in the art to use the Adams et al. organic group as the steric group in the modified carbon black of Adams et al.

The Examiner also asserts that Adams et al. discloses the use of the carbon black with a polymeric cationic amphiphile as an ink which may include a vehicle which functions as a carrier during printing and/or additives to improve printability and drying. The Examiner also asserts that Kato et al. discloses the preparation of the waterless lithographic printing plate in which one of the ingredients, such as the carbon black, is included in the photoconductive layer. Therefore, the Examiner concludes that if the person having an ordinary skill in the art had desired to improve the properties of the printing plate, such as printability of the printing plate, it would have been obvious to one skilled in the art to incorporate the modified carbon black of Adams et al. with a polymeric cationic amphiphile into the method of preparation of the waterless lithographic printing plate, as

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described in Kato et al., as an alternative to ordinary carbon black with an expectation of a similar success as in the process of Kato et al. For the following reasons, this rejection is respectfully traversed.

The modified pigment of the claimed invention includes a pigment a) having attached at least one steric group, and b) having attached at least one organic ionic group and at least one amphiphilic counterion, wherein the amphiphilic counterion has a charge that is opposite to that of the organic ionic group. It is important for the Examiner to appreciate that two different types of groups are attached to the pigment of the claimed invention. (See the claims and page 5, lines 11-24, for instance, of the present application). First, there is at least one steric group that is attached onto a pigment, and second, there is at least one organic ionic group having at least one amphiphilic counterion that is attached to the pigment. As discussed in the present specification at page 5, with respect to at least one steric group, any group that has the ability to be steric or promote steric hindrance can be attached onto the pigment.

Adams et al. discloses at least one organic group along with an amphiphilic ion attached to a carbon product. The amphiphilic ion of Adams et al. is not separately attached to the carbon product; it is associated with the organic group. Adams et al. does not teach or suggest separate steric groups and Adams et al. does not promote the steric hindrance that is associated with the steric group attached to the pigment of the claimed invention. As stated, Adams et al. teaches the attachment of one type of group, namely at least one organic group with an amphiphilic ion that has a charge that is opposite to the organic group. Thus, Adams et al. does not teach any additional steric group, which is also attached to a pigment as recited in the claims of the present application.

With respect to the Examiner's comment that the organic group in Adams et al. can be at

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least one aromatic group or one C₁-C₁₂ alkyl group which is directly attached to the carbon and that the bulky group, like the aromatic group, can be used as either the organic group or the steric group depending on the choice one skilled in the art, the Examiner's statement is not taught in Adams and is the Examiner's own speculation, and is based only on hindsight. Further, Kato et al. relates to a waterless lithographic printing plate and does not teach or suggest the use of a modified pigment and certainly not a pigment having attached at least one steric group and also an organic ionic group. Therefore, Kato et al. does not overcome these deficiencies. Accordingly, this rejection should be withdrawn.

At page 8 of the Office Action, the Examiner objects to claims 5 and 8-19 as being dependent upon on a rejected base claim. The Examiner asserts that claims 5 and 8-19 would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims. The undersigned and the applicant appreciate the Examiner's indication of the patentability of claims 5 and 8-19 if re-written in independent form. In view of the above comments, all claims should be in condition for allowance.

If there are any remaining questions, the Examiner is encouraged to contact the undersigned by telephone.


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CONCLUSION

In view of the foregoing remarks, the applicant respectfully requests the reconsideration of this application and the timely allowance of the pending claims.

If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 03-0060. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,


Luke A. Kilyk
Reg. No. 33,251

Atty. Docket No. 99104CON(3600-228-01)
KILYK & BOWERSOX, P.L.L.C.
53 A East Lee Street
Warrenton, VA 20186
Tel: (540) 428-1701
Fax.: (540) 428-1720

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